

Amendments to the Specification

Please delete paragraphs [0012] – [0014].

Please amend paragraphs [0011], [0029], [0032], [0035], [0038], [0041], [0042], [0045], [0046] and [0048] as follows:

[0011] FIG. 1 illustrates the amount of IL-8 produced after incubation of human monocyte THP-1 cells to which the purified p43 protein and its deletion-mutants are added respectively. ~~shows the relative location and the size of the deletion-mutants of a p43 prepared in the present invention compared to a normal p43.~~

[0029] *E. coli* BL21(DE3) was transformed with the above recombinant vector including the p43(1-147) gene. The transformed BL21 was cultured in 100 ml of LB medium (Luria Broth; 1 g NaCl, 1 g Bacto-tryptone, 0.5 g yeast extracts) and the p43(1-147) gene was expressed as a His-tag fusion protein form. The expressed p43(1-147) protein was purified by using nickel affinity chromatography and mono Q or S ion-exchange chromatography according to known method in the art (Park, S. G. *et al.*, *J. Biol. Chem.*, 274:16673-16676, 1999). To remove lipopolysaccharide, which induces inflammatory response, the purified protein was dialyzed with the pyrogen-free buffer solution (10 mM potassium phosphate (pH 6.0), 100 mM NaCl) overnight. After dialysis, the protein was loaded to a polymyxin resin (Bio-Rad) that was equilibrated with the same buffer, incubated for 20 minutes and eluted. The concentration of the remaining lipopolysaccharide was measured using the Limulus Amebocyte lysate QCL-1000 kit (Bio Whittacker). As a result, the concentration of the lipopolysaccharide was below 20 pg/ml--not able to induce inflammatory response. The purified protein was then subjected to SDS-PAGE. ~~As shown in FIG. 2, it was confirmed that the p43(1-147) protein having the molecular weight of 21 kDa was isolated purely.~~ It was confirmed that p43(1-147) protein having the molecular weight of 21kDa was isolated purely(data not shown).

[0032] ~~As shown in FIG. 2, it was confirmed that the p43(1-108) protein having the molecular weight of 20 kDa was isolated purely.~~ As a result, it was confirmed that p43(1-108) protein having the molecular weight of 20kDa was isolated purely(data not shown).

[0035] ~~As shown in FIG. 2, it was confirmed that the p43(91-256) protein having the molecular weight of 29 kDa was isolated purely. As a result, it was confirmed that p43(91-256) protein having the molecular weight of 29kDa was isolated purely(data not shown).~~

[0038] The human monocyte THP-1 cells (supplied from the ATCC and cultured selecting the sensitive cells to lipopolysaccharide) were inoculated to the RPMI1640 medium containing 10% fetal bovine serum (FBS) and 50 mu.g/ml streptomycin and penicillin, and cultured in 5% CO₂ at 37° C. The cultured cells were washed twice with serum-free RPMI1640, and then 2x10⁶ cells/ml were inoculated into 24-well plate containing 0.5 ml of serum-free RPMI1640 medium. The cells were cultured for 2 hours under the same condition, and stimulated for 4 hours by adding 100 nM of the proteins purified in the Example 1-3 respectively. The supernatants were collected, and the concentration of the TNF and the IL-8 was measured using the ELISA kit (PharMingen) according to the manufacturer's instructions. The stimulation experiments were repeated twice. The results of the experiments were shown in FIG. 3 and FIG. 4, respectively. The produced amount of IL-8 was shown in Fig. 1.

[0041] ~~As shown in FIG. 2, it was confirmed that the p43(1-312) protein having the molecular weight of 42 kDa was isolated purely. As a result, it was confirmed that p43(1-312) protein having the molecular weight of 42kDa was isolated purely(data not shown).~~

[0042] To measure a cytokine activity of the purified p43(1-312) protein, the each produced amount of the TNF and the IL-8 was measured according to the same method described in the Example 4. ~~The results were shown in FIG. 3 and FIG. 4, respectively. The produced amount of IL-8 was shown in Fig.1.~~

[0045] ~~As shown in FIG. 2, it was confirmed that the p43(148-312) protein having the molecular weight of 26 kDa was isolated purely. As a result, it was confirmed that p43(148-312) protein having the molecular weight of 26kDa was isolated purely(data not shown).~~

[0046] To measure a cytokine activity of the purified p43(148-312) protein, the each produced amount of the TNF and the IL-8 was measured according to the same method

described in the Example 4. ~~The results were shown in FIG. 3 and FIG. 4, respectively.~~ The produced amount of IL-8 was shown in Fig. 1.

[0048] Observing that the produced amount of the IL-8 induced by the above proteins, as shown in FIG. 1, ~~FIG. 4~~, in case of p43(1-132), the produced amount of IL-8 was 1,495 pg/ml, p43(148-312) was 650 pg/ml, p43(1-147) was 1,650 pg/ml, p43(1-108) was 1,050 pg/ml, and p43(91-256) was 1,950 pg/ml. From these results, it was confirmed that the amount of the IL-8 produced by p43(1-312) (p43 protein) and proteins comprising the N-terminal part of the p43 protein, i.e., p43(1-147), p43(1-108), and p43(91-256) was much more than that by p43(148-312) (EMAP II).